

Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 1 of 16

Simplified Level A Personnel Decontamination

The following decontamination line example and steps were developed to safely utilize the fewest number of personnel and resources possible while effectively protecting responders. These processes are based on Occupational Safety and Health Administration (OSHA) guidance found at https://www.osha.gov/SLTC/hazardouswaste/training/decon.html. These scaled-down procedures were developed based on the following assumptions:

- Responders are performing tasks that are not likely to result in suit contamination (i.e. air monitoring, site reconnaissance, oversight/command functions).
- Contamination will be, most likely, localized to the boots and gloves.
- Responders have some knowledge of chemicals and hazards that may be encountered during entry.
- PPE will be disposed. Any PPE that will be reused must be decontaminated on site. Depending on the types and concentrations of contaminants present, waste decontamination solutions and disposable PPE may need to be treated as a hazardous waste and disposed of accordingly.

Do not hesitate to implement a Full Decontamination Line staffed with sufficient personnel and resources if the hazards and conditions warrant the standard Full Decontamination Process.

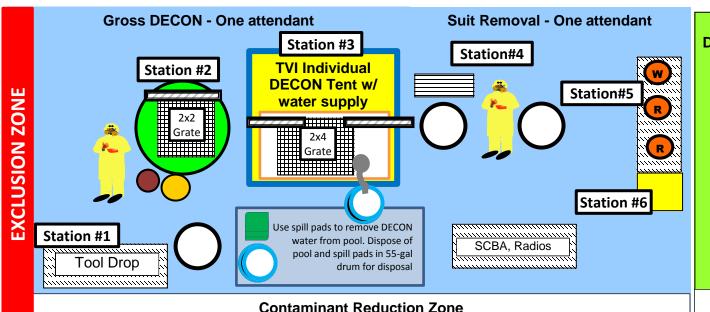
See <u>SOG D-101</u> for additional information on DECON Line strategy and tactics.



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 2 of 16

ERRPB Simplified Level A Decontamination Setup - 3 Entrants or less





REHAB Area (away from DECON, can be co-located with PPE dress out)

- **Medical Monitoring Table/Equipment**
- **Pop Up Tent**
- Chairs
- Cooler w/ potable water
- **Cooling/Misting Fans**

Support Zone

Equipment List:

- 1 10x30 Tarp/Plastic 1 – Plastic Pool
- 6 Traffic Cones 1 – 2x2 Plastic Grate
- 1 Roll Caution Tape

TVI Individual DECON Line

- 1 Indv. DECON Tent
- 1 Indv. Collection Basin
- 1 Sump Pump
- 1 2x4 Plastic Grate
- 1 Waste hose
- 1 Supply hose
- 1 Extension Cord w/ GFCI
- 1 Generator
- Adaptors and tools



3 – 4-foot tables

- 1 Long Handle Brush
- 1 Hudson Sprayer
- 4 5-gallon buckets
- 1 Hand/Face Wash
- **DECON Solutions**
- 55-gallon drums
- 55-gallon drum liners
- Spill Pads
- 1 MultiRAE Pro

Legend

Tarp/Plastic



TVI DECON Line



Kiddie Pool



Table, covered w/





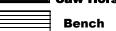
TVI Collection Basin



Grating













Drum Liner



SCBA Mask Wash



SCBA Mask Rinse



DECON Solution Bucket/Brush



Hudson Sprayer for Rinse



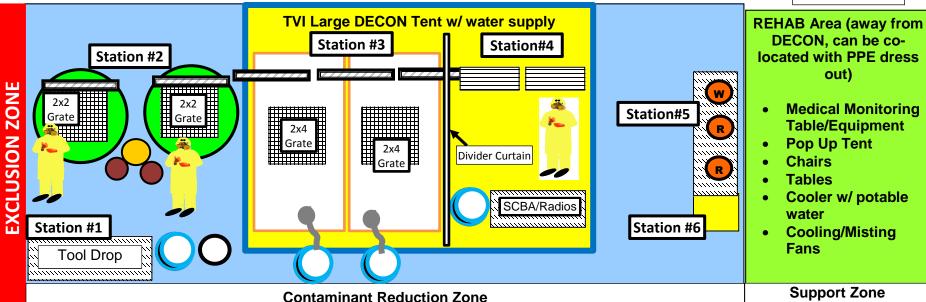
Hand/Face Wash Station



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 3 of 16

ERRPB Simplified Level A Decontamination Setup > 3 Entrants

Wind Direction

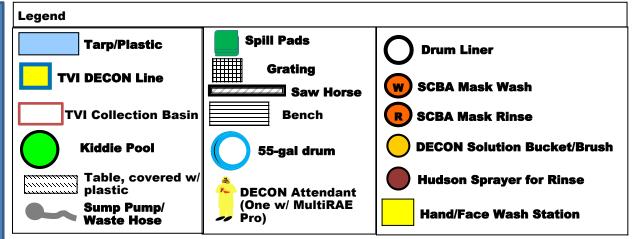


Medical Monitoring

- Pop Up Tent
- Cooler w/ potable
- Cooling/Misting

Support Zone

Equipment List: 2 – 10x30 Tarp/Plastic 2 – Plastic Pool 6 - Traffic Cones 2 – 2x2 Plastic Grate 1 – Roll Caution Tape 5 – Saw Horses TVI Large DECON Line 3 – 4-foot tables • 1 – TVI Lg. DECON Tent 2 – Long Handle Brush • 2 – Collection Basins 2 – Hudson Sprayer • 1 – Divider Curtain (2 sides) 4 – 5-gallon buckets • 2 – Sump Pump 1 – Hand/Face Wash • 2 – 2x4 Plastic Grate **DECON Solutions** • 2 – Waste hose 55-gallon drums • 1 – Supply hose 55-gallon drum liners • 2 – Extension Cord w/ GFCI Spill Pads • 1 – Generator 1 – MultiRAE Pro Adaptors and tools



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Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 4 of 16



ERRPB Specific Level A Decontamination Steps

Sample and Equipment Drop: All equipment should be placed in a designated drop area for DECON. Position any equipment and/or instruments that are returning to the EZ so that subsequent Entry Teams can easily collect them. Follow the <u>Sample DECON process</u> for all media samples obtained in the EZ. Trash, disposable sampling equipment, extra outer gloves, etc. should be left in an appropriate receptacle in the exclusion zone.



Station #2

- Entrant completes assisted gross wet DECON of outer gloves and boots
 - Brush in a downward motion, away from the suit into the collection pool





Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 5 of 16

tion #

 Attendant unlatches boots, removes and bags the HAZMAT boots for additional DECON





nu #3

4. Entrant enters Single Basin TVI DECON Tent and completes a self-wash. Arms out and up and rotate, 10 seconds per each of the four points of the compass.

NOTE: If the Entry Team consists of more than three members, consider using the large 3 basin TVI DECON Tent for the self-wash station. The Entrant will complete a slow rotation as they move from basin to basin.





Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 6 of 16

- Entrant exits DECON Tent and steps into drum liner. Attendant uses appropriate air monitoring/testing equipment (MultiRAE Pro, TVA 1000, pH Paper, M8 Paper, etc.) to verify efficacy of DECON.
 - For VOC monitoring, less than TLV/TWA or background, whichever is less
 - For pH monitoring, between 6 and 8
 - For other toxic sensor monitoring, no detectable levels
 - M8 Paper, no color change



Station #4

6. Attendant unzips and removes outer suit down past waist. Attendant seals suit in the drum liner for either further DECON or disposal.





7. Entrant steps into a second drum liner.





Station #4

ERRPB Level A Simplified DECON Line Job Aid

Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 7 of 16

8. Attendant removes radio equipment and sets aside for reuse



- 9. Maintaining Air Supply
 - Entrant loosens the shoulder and waist straps on SCBA
 - Attendant removes the SCBA from back, protecting facepiece, regulator and hose line



- 10. Remove Tape from Facepiece if necessary
 - Use pull tabs
 - Pull gently
 - Place tape in the drum liner



11. Unzip Inner Suit

- Pull back zipper overlap if necessary
- Use zipper extension
- Pull gently
- Zipper can be difficult to use
- Zipper extension could come loose from the fly





Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 8 of 16

12. Suit Removal

- Only touch the outside of the suit
- Remove hood
- Remove suit from the shoulders
- Gently shake from the should to release suit
- Keep outer gloves taped to suit
- Keep outer gloves on the outside of the suit



13. Inner Suit Removal

- Remove hands from outer glove, do not remove tape, should stay with the suit
- Gently shake hand away from suit
- Using inner gloves, grasp the inside of the suit only and remove suit below knees





Station #4

Outer glove stays attached to suit

14. Suit Removal

- Peel down like a banana
- Sit down if necessary
- Push suit into drum liner





Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 9 of 16

15. SCBA Removal

- With gloved hand, remove regulator while activating the cutoff button
- As you are removing the regulator, step out of the drum liner



n #5

Station #4

16. Mask Removal

 With inner gloves still on, remove mask and place in wash solution for DECON





Created: 02/13/2018, Updated: 03/14/18, Version 2

Page 10 of 16

17. Inner Glove Removal

- Remove the inner glove by gasping the palm and pulling one glove partially off
- Using the inside of the glove that was partially removed, remove the other glove and place in the drum liner







tion #6

18. Hand and Face Wash. Proceed to the hand and face wash station and wash your hands and face with soap and warm water. Although a thorough wash with soap and water is preferred, utilize cleaning wipes if a wash station is not available.



HAB

19. Proceed to medical monitoring as appropriate. Hydrate and rest.





Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 11 of 16

DECONTAMINATION PLAN LEVEL A ENTRIES

Decontamination Procedures									
Decontamination Solution	n	Type of DECON:		\boxtimes	Wet		Dry		
Personnel (Level A, B, C) Decontamination Stations (Check all that will be utilized)									
☑ Tool/Sample Drop		Outer Boot/Outer Glove Wash and Rinse		Outer l	Boot/	Outer G	ilove Re	emoval	
□ Outer Garment Wash		Outer Garment Removal		Respira	ator R	emoval	/Cleani	ing	
		Wash Hands and Face with Soap/Water		Showe	r				

Personnel Decontamination Procedures (Describe the personnel DECON steps)

- 1. Sample and Equipment Drop.
- 2. Entrant completes assisted gross wet DECON of outer gloves and boots. Brush in a downward motion away from the suit into the collection pool.
- 3. Attendant unlatches boots, removes and bags the HAZMAT boots for additional DECON.
- 4. Entrant enters DECON tent self-wash. Arms out and up and rotate, 10 seconds per four points of the compass.
- 5. Entrant exits DECON Tent and steps into drum liner. Attendant uses appropriate air monitoring/testing equipment (MultiRAE Pro, TVA 1000, pH Paper, M8 Paper, etc.) to verify efficacy of DECON.
 - For VOC monitoring less than TLV/TWA or background, whichever is less
 - For pH monitoring between 6 and 8
 - For other toxic sensor monitoring no detectable levels
 - M8 Paper no color change
- 6. Attendant unzips and removes outer suit down past waist. Attendant seals suit in the drum liner for either further DECON or disposal.
- 7. Entrant steps into a second drum liner.
- 8. Attendant removes radio equipment and sets aside for reuse.
- 9. While maintaining Air Supply, entrant loosens the shoulder and waist straps on SCBA. Attendant removes the SCBA from back, protecting facepiece, regulator and hose line.
- 10. Remove Tape from Facepiece if necessary. Use pull tabs. Pull gently. Place tape in the drum liner.
- 11. Unzip Inner Suit. Pull back zipper overlap if necessary. Use zipper extension.
- 12. Inner Suit Removal. Only touch the outside of the suit. Remove hood. Remove suit from the shoulders. Gently shake from the should to release suit. Keep outer gloves taped to suit. Keep outer gloves on the outside of the suit.
- 13. Inner Suit Removal. Remove hands from outer glove, do not remove tape, should stay with the suit. Gently shake hand away from suit. Using inner gloves, grasp the inside of the suit only and remove suit below knees.
- 14. Inner Suit Removal. Peel down like a banana. Sit down if necessary. Push suit into drum liner.
- 15. With gloved hand, remove regulator while activating the cutoff button. As you are removing the regulator, step out of the drum liner
- 16. Mask Removal. With inner gloves still on, remove mask and place in wash solution for DECON.
- 17. Inner Glove Removal. Remove the inner glove by gasping the palm and pulling one glove partially off. Using the inside of the other glove, remove the place in the drum liner.
- 18. Hand and Face Wash. Proceed to the hand and face wash station and wash your hands and face with soap and warm water.
- 19. Proceed to medical monitoring as appropriate. Hydrate and rest.



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 12 of 16

Emergency Decontamination Procedures (Describes the steps to be followed if emergency DECON is necessary)

- 1. Connect supplied air to the SAR pass-through.
- 2. Complete a rapid wet DECON of the outer suit based on the level of contamination.
- 3. Remove outer boots.
- 4. Remove, cut person out of the Level A Suit.
- 5. Remove communication equipment if necessary.
- 6. Remove SCBA backpack.
- 7. Remove chemical protective inner suit and bag for disposal.
- 8. Remove respirator protection and facepiece.
- 9. Provide needed medical care.

Equipment Decontamination Procedures (Including Heavy Equipment)

Station 1: Segregate Equipment Drop

Deposit equipment used on-site (i.e., tools, sampling devices and containers, monitoring instruments radios, clipboards, etc.) on the plastic drop cloth/sheet or in different containers with plastic liners. Each will be contaminated to a different degree and may decontaminated by different methods. Segregation at the drop reduces the probability of cross contamination. Loose leaf sampling data sheets or maps can be placed in plastic zip lock bags if contamination is evident.

Station 2: Physical Removal

Scrub equipment with detergent and water using long handle brushes or damp cloths. Sensitive equipment (i.e., radios, air monitoring) should be wiped down with a damp cloth/detergent. Consult the manufacturers for recommended decontamination solutions and procedures.

Station 3: Physical Removal with A High-Pressure Washer (Optional)

Use high pressure wash on grossly contaminated equipment that cannot be removed by hand. Pressure washing is typically used to decontaminate containment boom, boats, heavy equipment and other large equipment. Do not use high-pressure wash on sensitive or non-waterproof equipment. A specially constructed DECON pad will be needed for large equipment.

Station 4: Equipment Rinse

Wash soap off equipment with water by immersing the equipment in the water while brushing or using a low-pressure hose/sprayer. Repeat as many times as necessary.

Station 5: DECON Efficacy Screening

Use appropriate air monitoring/testing equipment (MultiRAE Pro, TVA 1000, pH Paper, Lumex, M8 Paper, etc.) or a visual assessment to verify efficacy of DECON.

- For VOC monitoring, less than TLV/TWA or background, whichever is less
- For pH monitoring, between 6 and 8
- For metallic Mercury, less then 3000 ng/m³
- For other toxic sensor monitoring, no detectable levels
- M8 Paper, no color change

Station 6: Clean Equipment Drop

Lay clean equipment on plastic sheeting. Once air dried stow/move equipment appropriate area for demobilization or reuse. Media sampling equipment will need to be further decontaminated following <u>SESDPROC-205</u>, Field Equipment Cleaning and Decontamination before reuse.

Sample Decontamination Procedures



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 13 of 16

Sampling Equipment Decontamination Procedures

Decontamination of equipment will be performed by using portable washtubs, sprayers, and disposable scrub brushes. Any equipment that cannot be thoroughly decontaminated along with the contents from the washtub will be considered hazardous and will be stored and disposed of appropriately.

Media Sampling Equipment

Media sampling equipment will need to be further decontaminated following <u>SESDPROC-205</u>, <u>Field Equipment</u> Cleaning and Decontamination before reuse.

Monitoring Equipment

If monitoring equipment becomes contaminated, it may require special cleaning techniques. Methods for decontamination will be obtained from the equipment's manufacturer.

Hand Tools

Hand tools will be cleaned as appropriate by chemical or physical means. At the end of the incident, if the hand tools cannot be decontaminated, they will be disposed of as hazardous waste.

Decontamination Waste Disposal Procedures

Decontamination waste will be segregated, characterized, and disposed of with similar appropriate waste streams generated by the response. Small amounts of liquid waste will be absorbed with absorbent pads and containerized in 55-gallon drum liners or 55-gallon drums. Large amount of liquid waste will be pumped into appropriate drums or totes. Other solid waste (spent PPE, VisQueen, etc.) will be containerized into 55-gallon drum liners or 55-gallon drums.

Decontamination Equipment						
☑ Plastic sheeting/Tarps	⊠ Tables					
⊠ Benches	☑ Pop-up Tents					
□ TVI Shower Tents	☑ Pools/Basins					
☑ Plastic Grates	⊠ Saw Horses					
□ 5-gallon buckets	□ Long Handle Scrub Brushes					
	☐ Fire Hydrant Wrench and Adaptors					
□ Traffic Cones	☑ Caution Tape					
⊠ Sump Pumps (hand or electric)	□ Decontamination Solutions					
⊠ Hoses	⊠ Sorbent Pads					
	☑ Drums/Totes for Contaminated DECON Water					
⊠ Spray Nozzles	□ 55-gallon Drum Liners					
	☑ Hand and Face Wash Station					



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 14 of 16

DECON Group/Division Supervisor Responsibilities

1.	Determine location of DECON area after consulting with Operations Section Chief, HAZMAT Branch Director and/or HAZMAT Group/Division Supervisor as appropriate.
2.	Determine level of DECON required. Consult with the Technical Specialists as necessary.
۷.	Determine level of Decon required. Consult with the reclinical specialists as necessary.
3.	Brief DECON Team of situation and procedures.
4.	Assign tasks.
5.	Supervise assembly of needed resources and equipment.
6.	Supervise set up of DECON corridor.
7.	Maintain communications with DECON Team. Coordinate with Groups, Divisions and Branches as appropriate (Medical, Site Access, Entry, etc.).
8.	Supervise personnel protective clothing procedures and safety.
9.	Monitor DECON activities and manpower. Maintain accountability control.
10.	Maintain access control.
11.	Maintain a log on personnel and team activities. Maintain accountability.
12.	Maintain corridor operation and resources as long as needed.
13.	Supervise DECON of Team members before shutdown of corridor.
14.	Supervise disposition of contaminated waste and equipment.
15.	Attempt to stay in the clean zone at all times.
16.	Work with the safety officer in all aspects at all incidents.

DECON Team Leader Checklist

1.	Obtain situation briefing:					
	a)	Material and hazards involved				
	b)	Wind and weather factors				
	c)	Hot and control zone perimeters				
	d)	DECON corridor location				
	e)	Overall DECON plan and tactics				
	f)	Manpower and resources available				
	g)	Level of protection and action needed				
	h)	Number of victims and contamination levels				
	i)	Outside Haz Mat team or units involved				
2.	Assemble and brief DECON Team:					
	a)	Review DECON plan and pertinent information				
	b)	Assign tasks				



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 15 of 16

- 3. Coordinate with EMS, rehab, and any other adjacent sectors before setup.
 - a) Assure proper locations of other sectors in relation to DECON.
 - b) Assure understanding of DECON procedures and requirements.
 - c) Assure communications for smooth movement of victims, personnel, or equipment.
 - d) Review protection for EMS staff.
- 4. Supervise DECON corridor setup:
 - a) Utilize steps outlined in DECON plan or DECON SOG.
 - b) Provide for safety of staff during setup.
 - c) Coordinate with Entry Team Leaders and conduct a walkthrough of DECON setup with Entry Teams.

General DECON Corridor Setup:

- 1. Mark off DECON area with caution tape and/or traffic cones.
- 2. Mark the entrance/exit to the Exclusion Zone and leave one opening for access into and out of DECON.
- 3. Lay out Visqueen or tarps over the entire DECON area to contain any spilled contaminated material.
- 4. Lay out Visqueen or tarps in appropriate areas for tool, SCBA, and clothing drops.
- 5. Place tables for tool drops, equipment, SCBA Facepiece DECON. Cover tables and benches with Visqueen
- 6. Provide hand and face wash and rinse buckets near the clean line
- 7. Provide a shelter for the medical sector and rehab. Also, there should be replacement clothing available in this area, if needed.
- 8. Extra supplies of gloves, boots, and other DECON items should be made available at or near the DECON sector.

Level A and B DECON Corridors:

- 1. Place wading pool/shower in proper locations.
- 2. Place hose lines at appropriate locations for low pressure rinses.
- 3. Determine DECON solutions needed, mix in five (5) gallon buckets, and place at proper locations with scrub brushes.
- 4. Place full SCBA bottles at SCBA exchange area.
- 5. | Supervise, monitor, and maintain control of the sector during operations:
 - a) Provide DECON briefing to the Entry Teams
 - b) Maintain checklist off all personnel entering sector.
 - c) Maintain level of protection and safety of personnel.
 - d) Assure that all personnel are decontaminated prior to SCBA exchange or leaving the DECON area.
 - e) Maintain access control.
 - f) Operate outside the clean line at the access control point.



Created: 02/13/2018, Updated: 03/14/18, Version 2 Page 16 of 16

- g) Provide additional needed resources.
- h) Maintain communications.
- i) Maintain accountability of all personnel at all times.
- 6. Secure DECON after incident termination:
 - a) Determine which equipment needs decontamination and which is to be disposed of.
 - b) Assure that equipment to be decontaminated later is sealed.
 - Insure that all personnel and equipment is decontaminated prior to leaving DECON.
 - d) Insure that all DECON staff go through medical sector for evaluation.
 - e) Insure that all contaminated waste is secured for later removal or sealed for immediate removal before sector termination.
 - f) Document loss of contaminated materials.
 - g) List all disposed contaminated equipment.
 - h) Confirm termination with appropriate General Staff.